

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY DOCKET NO.

03500.010530.4

APPLICATION NO.

09/161,774

APPLICANT

KIYOFUMI SAKAGUCHI, ET AL.

FILING DATE

September 29, 1998

GROUP

2823

LIST OF REFERENCES CITED BY APPLICANT(S)
(Use several sheets if necessary)

Submitted: November 25, 2003

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
G	4,116,751	09/26/78	Zaromb	156	600	
	4,727,047	02/23/88	Bozler, et al.	437	89	
	5,248,621	09/28/93	Sano	437	3	
	5,250,460	10/05/93	Yamagata, et al.	437	62	
	5,277,748	01/11/94	Sakaguchi, et al.	156	630	
	5,278,092	01/11/94	Sato	437	90	
	5,278,093	01/11/94	Yonehara	437	109	
	5,285,078	02/08/94	Mimura, et al.	257	3	
	5,290,712	03/01/94	Sato, et al.	437	24	
	5,320,907	06/14/94	Sato	428	446	
	5,331,180	07/19/94	Yamada, et al.	257	3	
	5,362,683	11/08/94	Takenaka, et al.	437	226	
	5,363,793	11/15/94	Sato	117	2	
	5,371,037	12/06/94	Yonehara	437	86	
	5,374,564	12/20/94	Bruel	437	24	
	5,403,771	04/04/95	Nishida, et al.	437	89	
	5,433,168	07/18/95	Yonehara	117	90	
	5,453,394	09/26/95	Yonehara, et al.	437	62	
	5,457,058	10/10/95	Yonehara	437	24	
	5,459,081	10/17/95	Kajita	437	3	
G	5,466,631	11/14/95	Ichikawa, et al.	437	62	
	5,536,361	07/16/96	Kondo, et al.	156	630.1	

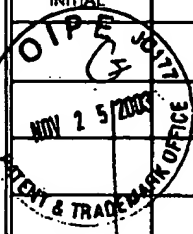
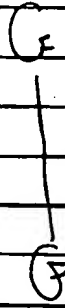
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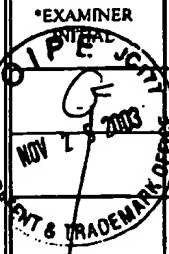
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FORM PTO 1449 (modified) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary) Submitted: November 25, 2003				ATTY DOCKET NO. 03500.010530.4		APPLICATION NO. 09/161,774	
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		5,644,156	07/01/97	Suzuki, et al.	257	485	
		5,670,411	09/23/97	Yonehara, et al.	437	62	
		5,811,348	09/22/98	Matsushita, et al.	438	455	
		5,854,123	12/29/98	Sato, et al.	438	507	
		5,856,229	01/05/99	Sakaguchi, et al.	438	406	
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		5,869,387	02/09/99	Sato, et al.	438	459	
		5,970,361	10/19/99	Kumomi, et al.	438	409	
		5,980,633	11/09/99	Yamagata, et al.	117	94	
		6,103,598	08/15/00	Yamagata, et al.	438	459	
		6,107,213	08/22/00	Tayanaka	438	762	
		6,121,117	09/19/00	Sato, et al.	438	459	
		6,194,245 B1	02/27/01	Tayanaka	438	57	
		6,326,280 B1	12/04/01	Tayanaka	438	409	
	G		6,426,274 B1	07/30/02	Tayanaka	438	458
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	EP	✓ 0417838 A1	03/20/91	EPO			
	EP	✓ 0469630 A2	02/05/92	EPO			
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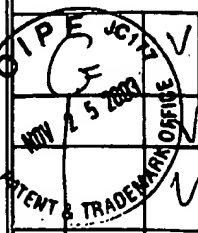
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	JP	62-108539 V	05/19/87	Japan			Abstract
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	JP	07-302889	11/14/95	Japan			Abstract
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FOREIGN PATENT DOCUMENTS						
*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES/NO/ OR ABSTRACT
<div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> G NOV 25 2003 JUNE F PATENT & TRADEMARK OFFICE </div>	9-162090	06/20/97	Japan			Abstract
	92/09104	05/29/92	PCT			
OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)						
G	V	T. Abe et al. "Silicon Kesshou to Doping (Silicon Crystal and Doping)", Maruzen Co., Ltd., 1986 (with partial translation)				
	✓	K. Barla, et al., "SOI Technology Using Buried Layers of Oxidized Porous Si", pp. 11-15 (1987)				
	✓	H. Baumgart, et al., "Light Scattering Topography Characterization Of Bonded SOI Wafers", Extended Abstracts, Elect. Chem. Soc. 1 st Symp., pp. 375-385 (1991)				
	✓	G.W. Cullen, ed., Journal of Crystal Growth, vol. 63, no. 3, pp. 429-590, Oct. 1983 (see, e.g., p. 547.)				
	V	Extended Abstracts (57 th Autumn Meeting, 1996), The Japan Society of Applied Physics (Abstr. 8a-V-8) (with translation)				
	✓	Extended Abstracts (44 th Spring Meeting, 1997), The Japan Society of Applied Physics and Related Societies (Abstr. 31a-B-5) (with translation)				
	✓	Extended Abstracts (59 th Autumn Meeting, 1998), The Japan Society of Applied Physics (Abstr. 15a-YB-4) (with translation)				
	✓	C. Harendt et al., "Silicon on Insulator Material by Wafer Bonding," Journal of Electronic Materials, vol. 20, no. 3, pp. 267-277, March 1991.				
	✓	Y. Hashimoto, "Shin-Kagaku Yougo Jiten" (New Chemical Term Dictionary), Sankyo Shuppan Co., Ltd., 6 th Edn (1973) (definition of anodic oxidation) (with translation)				
	✓	R.P. Holmstrom, et al. "Complete dielectric isolation by highly selective and self-stopping formation of oxidized porous silicon," Applied Physics Letters, vol. 42, no. 4, pp. 386-388, Feb. 1983.				
	✓	C.E. Hunt, et al., "Thinning of Bonded Waters: Etch-Stop Approaches", Extended Abstracts, Elect. Chem. Soc. 1 st Symp., pp. 165-173 (1991)				
	✓	K. Imai, "A New Dielectric Isolation Method Using Porous Silicon," Solid State Electronics, vol. 24, no. 2, pp. 159-164, 1981.				
G	V	K. Imai et al., "Crystalline Quality of Silicon Layer Formed by FIPOS Technology," J. of Crystal Growth 63, pp. 547-553 (1983)				
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	<input checked="" type="checkbox"/>	T. Ito et al. "Porous Silicon Crystal Prepared by Anodization", <u>Applied Physics</u> (Japanese) vol. 57, no. 11, pp. 1710-1720 (1988) (no translation)	
	<input checked="" type="checkbox"/>	V. Labunov, et al. "Heat Treatment Effect on Porous Silicon," <u>Thin Solid Films</u> , 137 (1986) pp. 123-134	
	<input checked="" type="checkbox"/>	W.P. Maszara, "Silicon-On-Insulator by Wafer Bonding: A Review", J. Electrochem. Soc., vol. 138, No. 1, pp. 340-347 (1991)	
	<input checked="" type="checkbox"/>	Kazutoshi Nagano, et al., "Oxidized Porous Silicon and It's Application", Semiconductor Research Lab Matsushita Electric Industrial Co., Ltd. SSD 79-95, pp. 49-54 (no translation) <i>(date unknown)</i>	
	<input checked="" type="checkbox"/>	Nikkei Microdevice, pp. 76-77 (July 1994) (with translation)	
	<input checked="" type="checkbox"/>	K. Ogasawara, et al., "Enhancement of Electroluminescence from n-Type Porous Silicon and Its Photoelectrochemical Behavior", J. Electrochem. Soc., vol. 142, no. 6, pp. 1874-1879 (1995)	
	<input checked="" type="checkbox"/>	M. Ohnishi, et al., "New Type Structures Of A-Si Solar Cell Submodules Fabricated By Microscopic Hole Spacing Technique", Record of the Photovoltaic Specialist Conference, Kissimimee, May 21-25, 1990, vol. 2, No. Conf. 21, pp. 1394-1399, May 21, 1990.	
	<input checked="" type="checkbox"/>	Patent Abstracts of Japan, vol. 18, No. 066 (E-1501), Feb. 3, 1994 (for JP-5-283722)	
	<input checked="" type="checkbox"/>	V. Raineri, et al., "Silicon-on-insulator produced by helium implantation and thermal oxidation", Appl. Phys. Lett. 66(26), 3653-3656 (June 1995)	
	<input checked="" type="checkbox"/>	Sato, et al., Extended Abstracts, <u>Elect. Chem. Soc.</u> , "Epitaxial Growth on Porous Si for a New Bond and Etch-back SOI," vol. 94-1, pp. 705-706 (1994).	
	<input checked="" type="checkbox"/>	H. Tayanaka, et al., "Thin-Film Crystalline Silicon Solar Cells Obtained by Separation of a Porous Silicon Sacrificial Layer" 2d World Conf. and Exhibition on Photovoltaic Solar Energy Conversion (1998)	
	<input checked="" type="checkbox"/>	T. Unagami, "Formation Mechanism of Porous Silicon Layer by Anodization in HF Solution," Journal of the Electrochemical Society, vol. 127, no. 2, pp. 476-483, Feb. 1980.	
	<input checked="" type="checkbox"/>	A. Uhler, Jr., "Electrolytic Shaping of Germanium and Silicon," The Bell System Technical Journal, vol. XXXV, pp. 333-347, Mar. 1956.	
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<input checked="" type="checkbox"/>	T. Yonehara et al., "Epitaxial layer transfer by bond and etch back of porous Si", Appl. Phys. Lett., 64(16), 2108-2110 (1994)		
<input checked="" type="checkbox"/>	Patent Abstracts of Japan, vol. 10, No. 039 (E-381), Feb. 15, 1986 (for JP-A-196955, October 5, 1985)		
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GF		5,175,610	12/29/1992	Kobayashi	257	676	
GF		4,670,763	06/02/1987	Ovshinsky, et al.	357	4	
GF		4,555,586	11/26/1985	Guha, et al.	136	259	
GF		4,426,657	01/17/1984	Abiru, et al.	357	29	
GF		4,064,521	12/20/1977	Carlson	357	2	
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES/NO/ OR ABSTRACT
GF		60-196955	10/05/1985	Japan	/	/	Abstract
GF		0 469 630 A2	02/05/1992	Europe	/	/	

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)	
GF	T. Yasumatsu, et al., "Ultrathin Si Films Grown Epitaxially on Porous Silicon", Applied Surface Science, Vols. 48 & 49, pp. 414-418 (1991)
GF	Handbook of Thin Film Technology, 5-17 to 5-25 (Eds., L. I. Maissel and R. Glang 1970)
GF	Robert F. Pierret, Semiconductor Device Fundamentals, pp. 347-368 (1996)

EXAMINER /George Fourson/	DATE CONSIDERED 09/11/2006
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GF		W. Kern & V. Ban, <u>Thin Film Processes</u>, Chemical Vapor Deposition of Inorganic Thin Films, pp. 257-331 (1978)						
GF		W. Luft & Y. Tsuo, <u>Hydrogenated Amorphous Silicon Alloy Deposition Processes</u>, pp. 125-144 (1993)						
GF		R. Pierret, Modular Series on Solid State Devices, Vol. 4, pp. 59-80 (1983)						
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